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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,744	02/10/2006	Maurizio Fraccon	25401041	5457

466 7590 02/02/2007  
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EXAMINER

SINGH, SUNIL K

ART UNIT	PAPER NUMBER
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3732

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/02/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/567,744		FRACCON, MAURIZIO	
	<b>Examiner</b>		<b>Art Unit</b>	
	Sunil K. Singh		3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/10/2006</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

### ***Drawings***

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings do not comply with the requirements set forth in 37 CFR 1.84 (e.g. some of the reference letters are not clear to the examiner).

Furthermore, the Examiner is not able to distinguish between some of the reference letters in the drawings. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.

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- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

#### Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)),

and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
- (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements,

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compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Additionally, the specification is objected to as being written in a confusing and unclear manner. The compound run-on sentences are difficult to follow and the improper use of English grammar throughout the specification is confusing. Note for example the first full sentence on page 1. Applicant is requested to carefully review the specification and make the necessary corrections.

3. The disclosure is objected to because of the following informalities: On page 9, the reference letter "D" is given to both the "stump" and the "funnel".

Appropriate correction is required.

***Claim Objections***

4. Claims 16 and 21 are objected to because of the following informalities: The term "piece-mono-lithe" is unclear. If applicant intends to say --monolithic--, then it must be corrected. Furthermore, Claims 15-25 have numerous grammatical errors.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 15-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

- In claim 15, it is unclear as to what the applicant is trying to claim in Lines 4-7. It is also not clear if the applicant is referring to the plant, to a method of inserting the plant, or a cutter.
- In regards to claim 19, the applicant does not clearly state that if the "pin" or the "funnel shaped shell" is made out of zirconium fibre with a polimerized compound.
- Regarding claim 20, the term "it" renders the claim indefinite because it is unclear what the applicant is referring to with the term "it". Furthermore, it is not clear what the applicant refers to with the phrase "to the one of the plant".

- In regards to claim 23, it is unclear to whether the “stump” or “pin” is “cemented with a photo polimerizable or a self-polimerizing compound.” It is also unclear to whether the “wall” or the “pin” is made out of “zirconium fibre.” Furthermore, it is unclear to what is “forming a mono-block between the walls of the plant-compound.” Claim 23 also recites the limitation “the funnel-shaped walls” in Line 9. There is insufficient antecedent basis for this limitation in the claim.
- Claim 24 recites the limitations: the “hollow” in Line 2; the “greater base-in” in Line 4; and the “circular apical base” in Line 5. There are insufficient antecedent basis for these limitations in this claims. In Line 1, it is not clear what comprises “inner surfaces”.
- Claim 25 recites the limitation “the hollow” in Line 3. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

7. As best understood by the Examiner, Claims 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Weissman (US 2002/0142265).

Weissman discloses a in Figure 2 a dental plant (18) that includes: a stump (22) having a truncated cone shape that is united to the body of the plant (18); the body of the plant and stump (22) consisting of one single piece-mono-lithe or mono-block (Fig. 2); the body of the plant (18) being cylindrical or conical in shape with turns (20) having a rough surface that end up at a smooth area of the neck of a variable length of about 2



millimeters. Weisman further discloses a stump (22) having a first trans-mucous part shaped as a cylinder and a second part having the shape of an "upside-down" truncated cone (Fig. 2).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. As best understood by the Examiner, Claims 19-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Blacklock (US 5,716,215) in view of Riley (US 6,663,387) in further view of Reidt et al. (US 6,627,327).

Blacklock discloses a dental plant (102) that includes: a stump (110; 128 in Fig. 5a) having a truncated cone shape inserted to the body (106) of a plant (102) forming a funnel shape shell (Figs. 1-5); a pin (126) that is bent (Fig. 5a) inside the shell; a stump (110) having an axis angled with respect to one of the plant (Fig. 1); a body of plant (106) and stump (110) consisting of a single piece-mono-lithe or mono-block (Figs. 1-5); a pin that project beyond the edges of the funnel-shaped walls to form a stump projection similar to a natural filed tooth (Figs. 1-5). However, Blacklock fails to disclose a plant having a body/stump/pin made of zirconium fibre and the use of cementing the pin in the stump by means of a photo polymerizable or a self-polymerizing compound.

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Riley teaches an implant that is made of aesthetic suitable material such as zirconium oxide in order provide a material that can be made to have mechanical strength sufficient to support occlusal forces and are relatively inert when exposed to body fluid and tissues (Column 4, Lines 8-17). Reidt et al. teaches a dental prosthetic device where the support section (12) and the milling section (14) are cemented together by use of a self polymerizing compound such as epoxy (Column 7, Lines 27-36) in order provide a stronger bond between the two sections (Column 4, Lines 39-41). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blacklock by incorporating the aesthetic suitable material, as taught by Riley, in order to provide a plant that will have sufficient strength to remain inert when exposed to body fluids and tissues. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blacklock by using a self polymerizing cement, as taught by Reidt et al., in order to strongly bond the pin with the hollow stump.

10. As best understood by the Examiner, Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blacklock (US 5,716,215) in view of Riley (US 6,663,387) in further view of Weissman (US 2002/0142265).

Blacklock/Riley discloses the invention substantially as claimed except for a plant with a key having the shape of a cylindrical parallelepiped with a square base used for screwing the plant into a bone.

Weissman teaches a dental plant (18) with a key (124) having a parralleliped stem (Figs. 36-38) with a square base (126) that is used for engaging a ratchet or cap [0139] and for driving the implant into the bone [0040-0042]. Therefore, it would have been obvious to one having ordinary skill in the art to modify Blacklock/Riley with a plant having a key, as taught by Weissman, in order to engage the ratchet and screwing the plant into the bone.

### ***Conclusion***

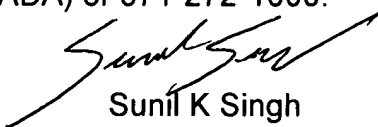
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 Form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunil K. Singh whose telephone number is (571) 272-3460. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris L. Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Sunil K Singh  
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SKS



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